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APPLICATION SERIAL NO.: 09/877,526

TECH CENTER 1600/2900

**Redlined Version of Amended Claims**

(Submitted with response to the Office Action mailed July 12, 2002)

9. (Amended) A method comprising:

a-) ~~contacting the nucleic acid sensor molecule of claim 1~~

i) a nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components, wherein, in response to an interaction of a single stranded RNA (ssRNA) having a single nucleotide polymorphism (SNP) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction on a reporter molecule resulting in a detectable response, and wherein the reporter molecule and ssRNA having a SNP are different,

with

ii) a system comprising at least one ssRNA having a SNP

under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to catalyzes a chemical reaction on the reporter molecule resulting in a detectable response; and

b-) assaying for the chemical reaction resulting in a detectable response.

10. (Amended) A method comprising:

a-) ~~contacting the nucleic acid sensor molecule of claim 2~~

i) a nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components, wherein, in response to an interaction of a single stranded DNA (ssDNA) having a SNP with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction on a reporter molecule resulting in a detectable response, and wherein the reporter molecule and ssRNA having a SNP are different,

with



ii) \_\_\_\_\_ a system comprising at least one ssDNA having a SNP

under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to catalyzes a chemical reaction on the reporter molecule resulting in a detectable response; and

b.) assaying for the chemical reaction resulting in a detectable response.

15. (Amended) A method comprising contacting ~~the nucleic acid sensor molecule of claim 7~~

a) \_\_\_\_\_ a nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components, wherein, in response to an interaction of a single stranded RNA (ssRNA) having a SNP with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction on a reporter molecule resulting in ligation of a first predetermined RNA molecule to a second predetermined RNA molecule, and wherein the ssRNA having a SNP and the predetermined RNAs are different,  
with-with

b) \_\_\_\_\_ a system comprising at least one ssRNA having a SNP

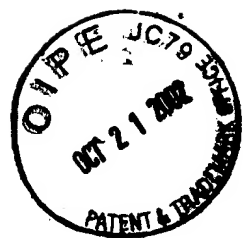
under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to ligate ~~a~~ the first predetermined RNA molecule to another the second predetermined RNA molecule.

16. (Amended) A method comprising contacting ~~the nucleic acid sensor molecule of claim 3~~

a) \_\_\_\_\_ a nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components, wherein, in response to an interaction of a single stranded RNA (ssRNA) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction on a reporter molecule resulting in cleavage of a predetermined RNA molecule associated with a disease, and wherein the ssRNA having a SNP and the predetermined RNA are different;

with

b) \_\_\_\_\_ a system comprising at least one ssRNA



under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to cleave the predetermined RNA molecule.